IN THE CLAIMS:

1. (original) A method of fabricating a non-luminescent multi-cell substrate useful for carrying a microarray of biological polymers comprising the acts of:

providing a non-porous substrate;

providing a non-luminescent microporous membrane formed by a phase inversion process, the process comprising the acts of:

formulating a casting dope comprising a solvent, one or more non--solvents, opaque solids, and polyamide(s);

mixing and blending the casting dope to cause dissolution of the polyamide and opaque solids therein;

producing an opaque solids-filled phase inversion casting dope;

casting a thin portion of the opaque solids-filled phase inversion casting dope; and

quenching the casted portion of the opaque solids-filled phase inversion casting dope to form a substrate;

providing a surface treatment;

applying the surface treatment to the non-porous substrate; and

intermingling the non-porous substrate having the surface treatment with the non-luminescent microporous, membrane such that the non-porous substrate is sufficiently covalently bonded to the non-luminescent microporous membrane wherein the combination produced thereby is useful in microarray applications.

2. (original) The method of claim 1 wherein the surface treatment is selected from the group comprising:

3-aminopropyl triethoxysilane, N-(2-aminoethyl)-3-aminopropyl trimethoxysilane, 3-glycidoxypropyltrimethoxysilane, (10-carbomethoxydecyl) dimethylchlorosilane or 2-(3,4-epoxycyclohexyl)-ethyltrimethoxysilane.

3. (original) The method of claim 1 wherein, the surface treatment comprises a 3-aminopropyl triethoxysilane followed by treatment with a polyamido-polyamine epichlorohydrin resin.

4. (original) The method of claim 1 wherein, the non-porous substrate is selected from the group comprising:

glass, Mylar, ceramic, acrylic, polypropylene, polycarbonate, polysulfone, polyamide and polyaramid.

5. (original) The method of claim 1 wherein, the non-porous substrate is glass.

6. (original) The method of claim 1 wherein, the non-porous substrate is a polyester.

7. (original) The method of claim 1 wherein, the non-porous substrate is Mylar.

8. (original) The method of claim 7 wherein, , the surface of the Mylar is oxidized with sulfuric acid or corona discharge to enable it to bond to a polyamido polyamine epichlorohydrin polymer.

9. (original) The method of claim 1 wherein the opaque solids are carbon particles.

10. (original) The method of claim 1 wherein the carbon particles are less than 5 microns in size.

11. (original) The method of claim 1 wherein the carbon particles are substantially uniformly distributed throughout the polyamide support

12. (original) The method of claim 1 wherein the carbon particles are partially incorporated into the polyamide support.

13. (original) The method of claim 1 wherein the carbon particles are substantially wholly incorporated into the polyamide support.

14. (original) The method of claim 1 wherein the polyamide support is charge-modified.

Claims 15-31 (cancelled)

32. (Amended) A composite microarray slide~~multi-cell substrate~~, useful for carrying a microarray of biological polymers comprising:

an optically-passive substrate comprising:

a phase-inversion support and opaque solids that are substantially non-reactive chemically with the phase inversion support, in a weight ratio with said phase-inversion support such that said optically-passive substrate absorbs light at substantially all wave lengths from about 300 nm to about 700 nm;

a non-porous substrate; and

a surface treatment, operatively positioned between the microporous membrane and the non-porous substrate, for sufficiently covalently bonding the non-porous substrate to the microporous membrane wherein the combination composite microarray slide~~multi-cell substrate~~ produced thereby is useful in microarray applications.

33. (Amended) The composite microarray slide~~multi-cell substrate slide~~ of claim 32 wherein the phase-inversion support comprises polyamide.

34. (Amended) The composite microarray slide~~multi-cell substrate~~ of claim 32 wherein the phase-inversion support is in the form of a membrane.

35. (Amended) The composite microarray slide~~multi-cell substrate~~ of claim 32 wherein the opaque solids are carbon particles.

36. (Amended) The composite microarray slide~~multi-cell substrate~~ of claim 35 wherein the carbon particles are less than about 5 microns in size.

37. (Amended) The composite microarray slide~~multi-cell substrate~~ of claim 35 wherein the carbon particles are substantially uniformly distributed throughout the polyamide support.

38. (Amended) The composite microarray slide~~multi-cell substrate~~ of claim 35 wherein the carbon particles are partially incorporated into the polyamide support.

39. (Amended) The composite microarray slide~~multi-cell substrate~~ of claim 37 wherein the substrate absorbs light at substantially all wavelengths from about 300 to about 700 nm.

40. (Amended) The composite microarray slide~~multi-cell substrate~~ of claim 32 wherein the polyamide has been charge-modified.

41. (Amended) The composite microarray slide~~multi-cell substrate~~ of claim 39 wherein the substrate has a reflectance of no more than 50% of incident light at any wavelength within said range of wavelengths.

42. (Amended) The composite microarray slide~~multi-cell substrate~~ of claim 32 wherein the phase-inversion support is hydrophilic.

43. (Amended) The composite microarray slide~~multi-cell substrate~~ of claim 42 wherein the phase-inversion support is skinless.

44. (Amended) The composite microarray slide~~multi-cell substrate~~ of claim 43 wherein the phase-inversion support comprises nylon.

45. (original) The method of claim 1 wherein the phase inversion membrane is selected from the group consisting of:

nylon 66, nylon 46, nylon 6, polysulfone, polyethersulfone, polyvinylidenediflouride (PVDF).

Kindly add the following new claims:

46. (New) A composite microarray slide, useful for carrying a microarray of biological polymers comprising:

a microporous membrane formed by a phase inversion process;

a non-porous substrate; and

a surface treatment, operatively positioned between the microporous membrane and the non-porous substrate, for sufficiently covalently bonding the non-porous substrate to the microporous membrane wherein the combination multi-cell substrate produced thereby is useful in microarray applications.

47. (New) The composite microarray slide of claim 46 wherein, the surface treatment is selected from the group comprising:

3-aminopropyl triethoxysilane, N-(2-aminoethyl)-3-aminopropyltrimethoxysilane, 3-glycidoxypropyltrimethoxysilane, (10-carbomethoxydecyl) dimethylchlorosilane or 2-(3,4-epoxycyclohexyl)-ethyltrimethoxysilane.

48. (New) The composite microarray slide of claim 46 wherein, the non-porous substrate is selected from the group comprising:

glass, Mylar, ceramic, acrylic, polypropylene, polycarbonate, polysulfone, polyamide and polyaramid.

49. (New) The composite microarray slide of claim 46 wherein, the surface treatment comprises:

a 3-aminopropyl triethoxysilane followed by treatment with a polyamido-polyamine epichlorohydrin resin.

50. (New) The composite microarray slide of claim 46 wherein, the non-porous substrate is glass.

51. (New) The composite microarray slide of claim 46 wherein, the non-porous substrate is a polyester.

52. (New) The composite microarray slide of claim 46 wherein the, the non-porous substrate is Mylar.

53. (New) The composite microarray slide of claim 46 wherein the phase inversion membrane is selected from the group consisting of:

nylon 66, nylon 46, nylon 6, polysulfone, polyethersulfone and polyvinylidenediflouride (PVDF).

54. (New) The composite microarray slide of claim 46 wherein the surface treatment has no discernable finite thickness or mass which could add nonuniformity to the overall thickness of the multi-cell substrate.

55. (New) The composite microarray slide of claim 46 wherein the surface treatment minimizes participation in the binding or detection of nucleic acid or protein analytes.

56. (New) The composite microarray slide of claim 46 wherein the surface treatment minimizes the interference of the substances used to connect the solid substrate portion to the porous membrane portion thereof with the detection of analytes.

57. (New) The composite microarray slide of claim 46 wherein the surface treatment at least substantially eliminates nonuniformity of the overall thickness of the substrate/membrane combination structure.